



Fuel Lube

BY CHARLIE BECKER, EAA HOMEBUILT COMMUNITY MANAGER

ON THE ONE WEEK Wonder that we built during AirVenture Oshkosh 2014, I was noticing fuel streaks on the upper wing skin coming from the fuel caps. This is a bad thing on any aircraft, but on the One Week Wonder it was erasing the signatures of some of the builders! After making sure the fuel streaks were not just the result of sloppy refueling, I did two things to eliminate the issue. The most obvious was tightening the fuel cap. It is a flush-mounted cap, and the lock mechanism can be adjusted. The second thing was to make sure no fuel was escaping around the filler neck.

For this I grabbed some fuel lube. This is a really handy product to have around. It is designed to be a lubricant/sealant for fuel and oil line valves and is resistant to high temps. A can would last the average homebuilder many lifetimes, but it is also available in a 5-ounce tube (Aircraft Spruce Part Number 09-00306). It will not gum, crack, or dry out.

I applied the fuel lube to the threads on the filler neck. I skipped a few threads to make sure I didn't get any fuel lube into the system as it will not dissolve in contact with fuel. You need to be mindful that a big glob of it could plug up a fuel system.

Another use for fuel lube is a dab on a screwdriver will stick a washer to it. A handy trick when you are struggling to install a washer in tight places.

DRIPPING FUEL DRAIN VALVE

I NOTICED THE EAA staff-built Zenith had developed a slow drip from one of the push-type fuel drain valves. I was sure it was some debris causing the leak. The tank was full of fuel, and I was dreading having to drain the fuel in order to pull the fuel drain valve.

Fortunately I talked it over with John Hopkins, EAA's director of aircraft maintenance, before draining any fuel. He told me it was unnecessary to drain the tanks and volunteered to show me how to do it without making a complete mess.

First, you need either a spare fuel drain or a pipe plug of the correct thread. We were working with a CAV-110 fuel drain, which is a 1/8-inch NPT thread. The part number is stamped on the outside so you can look it up. The last thing you want is to find out you have an incompatible plug after pulling the dripping one.

Second, tie a rag around your forearm to prevent fuel from running down your arm and into your shirt. Also put on a pair of safety glasses to protect your eyes.

Now it is just a matter of loosening the valve with one hand and installing the plug as quick as possible with the other. I was surprised by how little fuel actually ended up on John or the floor.

Once we had the fuel valve out, we found aluminum shavings that were preventing the O-ring from completely seating. Clearly we didn't do a good enough job of flushing the tanks. We cleaned the valve and flushed it with some mineral spirits, applied some fuel lube to the threads making sure we skipped the first thread, and reinstalled the fuel valve.

Problem solved.



GOT A HINT?

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